SPECIFICATION CHANGE-1
November 14, 1974

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SPECIFICATION

FPS-60 RADAR NAS INTERFACE MODIFICATION

"This specification change forms a part of FAA-E-2500 dated October 12, 1971."

Page 4, Add new paragraph following 3.3.1:

3.3.2 Beacon Video and Azimuth Pulse modification.

The contractor shall familiarize himself with the output characteristics of the azimuth pulse generators in use by the FAA including SG-135, TD-140, SG-244, FA-8906, etc. Design of ACP and ARP CCAs shall be universally compatible with the APGs in use, requiring only backplane strapping, CCA strapping, or switching on CCA front panels. If CCAs might not be identically strapped in normal operation, inclusion of suitable markers for positive identification of the strapping, either ARP or ACP, shall be provided."

Piece parts in the added assemblies not previously identified in Section 5 of TI 6340.5 shall be considered nonstandard and thus will require approval in accordance with paragraph 1-3.14.8 of FAA-G-2100/1.

FAA-G-2100 shall apply except as modified by the contract, and herein.

Page 8, Paragraph 3.5.5

Add: "(h) Beacon Video Amplifiers."

Page 9, Add new paragraph following 3.5.5.3:

"3.5.5.4 Beacon Video Amplifiers

Triple output video amplifiers for distribution of beacon video shall be provided for installation in existing printed circuit card slots. Two such amplifier CCAs shall be provided for each field system; one board for active processing and one spare board.

Beacon video amplifiers shall have, in addition to the general video signal specifications of FAA-E-2500 and FAA-E-2501, the following bandpass:

As referenced to the level at 100 KHz, the response shall not deviate more than ±1dB from 1000Hz to 4MHz and ±3dB from 60Hz to 5MHz.

Negative signals, such as the gate waveform on AN/UPX-14 video output, shall not cause the baseline to deviate from its set value."

Page 13, Add new paragraphs following 3.5.16:

"3.5.17 Azimuth Pulse Generator Amplifiers

Dual output amplifier/waveshapers (each amplifier/shaper shall have two isolated buffered outputs) for distribution of Azimuth Change Pulses (ACP) and Azimuth Reference Pulses (ARP) shall be provided for installation in existing spare printed circuit card slots. Four such amplifier/waveshaper CCAs shall be provided for each field system; two boards, one for ACPs and one for ARPs for active processing and two boards for spares. This requirement shall not be construed as making identical ACP and ARP CCAs mandatory, however, if the contractor deems this practical, it is desirable.

Azimuth Pulse Generator Amplifier outputs shall be TTL-compatible and shall properly interface with AN/FYQ-47/49 azimuth channel inputs with 350 feet of intervening 75-ohm (RG-59/u) coaxial cable.

3.5.18 Connector Panel and Motherboard

Appropriate changes to the motherboards to implement beacon video and azimuth pulse amplifiers shall be provided. An additional connector panel, suitably marked, with connectors for each active output shall be provided.

Changes shall be accomplished in such a manner that installation and checkout of the modification can be accomplished by FAA field technicians utilizing tools and test equipment generally available at an FPS-60 radar facility."

Page 14, Add new paragraph following 4.1:

"4.1.1 Beacon Video and Azimuth Pulse testing.

Tests shall be in accordance with FAA-G-2100, and hereunder except that field tests shall be limited to kitproofing on one facility selected by the FAA. Type tests are not required. Factory production tests of each complete circuit card assembly shall be conducted in two phases separated by at least 72 hours during which all normal supply potentials shall be applied. Phase I shall consist of verification of circuit continuity by application of simulated inputs and observation of outputs. Phase II shall consist of tests which verify all performance requirements. The contractor shall submit and amend as required by the Government, test plans to accomplish testing as required by paragraph 1-4.2 of FAA-G-2100/1."

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